REMARKS

Introduction

In response to the final Office Action dated April 14, 2008, Applicants have amended claim 1. Support for amended claim 1 is found in, for example, Table 1 and pg. 8, lines 16-19 of the originally filed specification. Care has been taken to avoid the introduction of new matter. Claims 8 and 16 are withdrawn. In view of the foregoing amendments and the following remarks, Applicants respectfully submit that all pending claims are in condition for allowance.

Claim Rejection Under 35 U.S.C. § 103

Claims 1-7 and 9-15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,935,722 to Moorhead et al. ("Moorhead").

Applicants traverse.

In the Advisory Action dated July 28, 2008, the Examiner contends that the specification does not clearly define the term affinity. The Examiner concludes that since "affinity" is not defined in the specification, the term is given its broadest reasonable interpretation.

Applicants respectfully submit that the rejection is moot in view of the foregoing amendment of claim 1, which deleted the phrase, "an ***affinity*** with the at least one of oxygen and carbon included in said upper film that is larger than such ***affinity*** of iron."

An aspect of amended claim 1 includes a soft magnetic material having an absolute value of heat generated when a primary compound is produced by a reaction between the nonferrous metal and at least one of oxygen and carbon included in the insulating upper film that is ***greater*** than an absolute value of heat generated when a primary compound is produced by a reaction between iron and the at least one of oxygen and carbon.

Moorhead discusses core loss, which is the sum of the hysteresis loss and eddy current loss. Moorhead describes that when a ferromagnetic material is exposed to an eddy current, an increase in heat generation with the core material results. Moorhead is *silent* regarding an absolute value of heat generated, specifically the absolute value of heat generated when a primary compound is produced by a reaction between the nonferrous metal and at least one of oxygen and carbon included in the insulating upper film, and the absolute value of heat generated when a primary compound is produced by a reaction between iron and the at least one of oxygen and carbon.

Thereby, as taught in the instant specification, the infiltration of oxygen and carbon into the metal magnetic particle known as the **gettering effect** is prevented (*see, e.g.,* pg. 2, line 25 - page 3, line 10 of the originally filed specification). This minimizes the increase in the impurity concentration within the metal magnetic particle, which prevents degeneration of the metal magnetic particle in its magnetic properties. Preventing oxygen and carbon from diffusing into the metal magnetic particle also minimizes the decrease in the oxygen and carbon contents in the upper film, thus preventing decomposition or degradation of the upper film, which would result in lower insulation in the upper film. However, Moorhead does not disclose or suggest this, and apparently is unaware of the unexpected improvement in preventing the gettering effect provided by the claimed soft magnetic material.

As Moorhead is *silent* as to a lower film surrounding a surface of each metal magnetic particle including a nonferrous material, it cannot provide a basis for asserting inherency of the claimed absolute value of heat generated when a primary compound is produced by a reaction between the nonferrous metal and at least one of oxygen and carbon included in the insulating upper film. Thus, Moorhead fails to disclose or infer, "...a lower film surrounding a surface of

said metal magnetic particle and including a nonferrous metal; and an insulating upper film surrounding a surface of said lower film and including at least one of oxygen and carbon, wherein ***an absolute value of heat generated when a primary compound is produced by a reaction between said nonferrous metal and at least one of oxygen and carbon included in said insulating upper film is greater than an absolute value of heat generated when a primary compound is produced by a reaction between iron and said at least one of oxygen and carbon***," as recited in amended claim 1.

Similarly, the nonferrous metal has a diffusion coefficient with respect to at least one of oxygen and carbon included in the upper film that is ***smaller*** than such diffusion coefficient of iron, as required by claim 9. The diffusion coefficient D is measured using the formula: D_0 x exp(-Q/RT) where D_0 is the diffusion frequency coefficient, R is a gas constant 8.315 (J/mole/K), and temperature in Kelvin degrees. Thereby, as taught in the instant specification, the diffusion rate of oxygen and carbon toward the metal magnetic particle from the upper film is reduced at the lower film, which prevents oxygen and carbon from infiltrating into the metal magnetic particle that is known as the **barrier effect** (*see, e.g.,* pg. 3, line 19-pg. 4, line 4; Table 2 of the originally filed specification). However, Moorhead does not disclose or suggest this, and apparently is unaware of the unexpected improvement in minimizing the increase in impurity concentration in the metal magnetic particle, and thus prevents deterioration in magnetic properties of the metal magnetic particle made possible by the claimed soft magnetic material.

Therefore, Moorhead fails to disclose or suggest, "...wherein ***said nonferrous metal has a diffusion coefficient with respect to the at least one of oxygen and carbon included in said upper film that is smaller than such diffusion coefficient of iron***," as recited in claim 9.

Further, the Examiner failed to provide requisite factual basis to support the motivation element, noting that the claimed diffusion coefficient is functionally significant. It is not obvious to select a soft magnetic material with a lower film including ***a nonferrous metal having a diffusion coefficient with respect to the at least one of oxygen and carbon included in the upper film that is smaller than such diffusion coefficient of iron***.

Accordingly, in view of the foregoing, withdrawal of the foregoing rejection is respectfully requested.

Conclusion

In view of the above amendments and remarks, Applicants submit that this application should be allowed and the case passed to issue. If there are any questions regarding this Amendment or the application in general, a telephone call to the undersigned would be appreciated to expedite the prosecution of the application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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